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Quarterly Business and Employment Dynamics: Experimental Estimates, First Quarter 2001 to Third Quarter 2014

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.	not available for any reference period
..	not available for a specific reference period
...	not applicable
0	true zero or a value rounded to zero
0^s	value rounded to 0 (zero) where there is a meaningful distinction between true zero and the value that was rounded
^{p}	preliminary
^{r}	revised
x	suppressed to meet the confidentiality requirements of the *Statistics Act*
^{E}	use with caution
F	too unreliable to be published
*	significantly different from reference category ($p < 0.05$)

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Quarterly Business and Employment Dynamics: Experimental Estimates, First Quarter 2001 to Third Quarter 2014

by Danny Leung[1], Economic Analysis Division

This *Economic Insights* article presents quarterly estimates of employer business entry and exit, and the associated job creation and destruction from the first quarter of 2001 to the third quarter of 2014. These quarterly estimates supplement the annual data provided by Statistics Canada's Longitudinal Employment Analysis Program by providing more timely, infra-annual data on business and employment dynamics. Quarterly entrants[2] and exiters[3] are identified by determining if enterprises had employment in adjacent years, and examining the timing of this employment. Job creation by entrants is the sum of all jobs across firms that started to be employers; job destruction by exiters is the sum of all jobs across firms that ceased to be employers. The data pertain to all industrial sectors except those primarily involved in educational services, health care and social assistance, and public administration.

Small, young businesses are important to the employment growth of an economy. They account for a disproportionate share of gross job creation and net employment growth in a number of countries who are members of the Organisation for Economic Co-operation and Development.[4] In the United States the slow recovery in overall job creation up to 2011 has been linked to weak job creation by young firms.[5,6] Entrants and their contribution to employment growth are, therefore, indicators of a healthy and dynamic economy.

Since the late 1980s, Statistics Canada has produced annual statistics on business entry and exit, and job creation and job destruction from its Longitudinal Employment Analysis Program (LEAP). However, the time lag between the end of the year and the production of these statistics is substantial. For example, the 2013 LEAP data will not be available until the summer of 2015. Quarterly estimates fill a need for more timely, sub-annual indicators of business and employment dynamics.

Methodology

Both LEAP and the quarterly estimates cover incorporated and unincorporated enterprises with employees. In LEAP, employer enterprises are identified as businesses that annually issue one or more statements of remuneration paid (T4 slip) from the Canada Revenue Agency (CRA) to their employee(s) for income tax purposes. To obtain more timely, infra-annual data, the quarterly estimates also use CRA payroll deduction data—the same data that are used as input in the Survey of Employment, Payroll and Hours to compile total payroll employment, and in the National Accounts to calculate the number of paid employee jobs. The quarterly estimates are consistent with the annual estimates of business entry and exit from LEAP[7] and the labour statistics published in the National Accounts. The quarterly estimates are seasonally adjusted and annualized.

Gross creation and destruction is sizeable relative to net employment growth

Gross job creation is the sum of the increase in the number of jobs across all entrants and across all incumbent enterprises that increase their employment. Gross job destruction is the sum of the decrease in the number of jobs across all enterprises that exit and across all incumbent enterprises that reduce their employment. Net employment growth is the difference between job creation by entrants and incumbents and job destruction by exiters and incumbents.

Over the period from the first quarter (Q1) of 2001 to the third quarter (Q3) of 2014, the average annualized quarterly job creation rate[8] for entrants was 2.0%. The average job destruction rate for exits was 1.5%. The average net employment

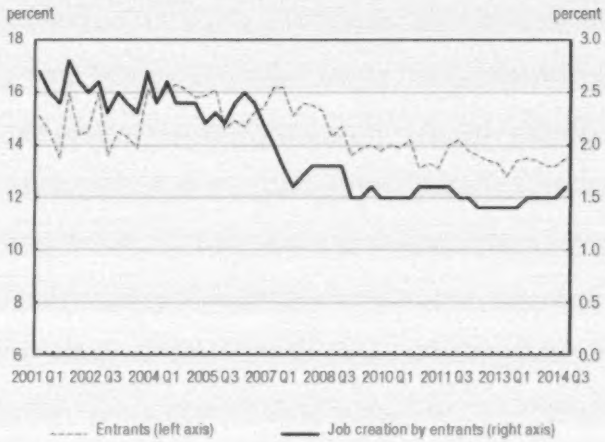
1. These estimates are the result of joint work by Robby Bemrose, Matt Krzepkowski, Ryan Macdonald, and Anne-Marie Rollin. The contributions of René Beaudoin, Jamie Brunet, Alison Hale, Danielle Lebrasseur, Brett Singbeil, Gaetan St-Louis and Susan Teman are acknowledged and appreciated.
2. To be classified as an entrant in a particular quarter, the enterprise cannot have employment in any of the preceding quarters in the same year, and any employment in any quarter in the previous year.
3. To be classified as an exiter in a particular quarter, the enterprise must not have employment in any of the subsequent quarters in the same year, and any employment in any quarter in the subsequent year.
4. See Criscuolo, Gal and Menon (2013).
5. See Haltiwanger, Miranda and Jarmin (2013).
6. In Canada, Dixon and Rollin (2012) find that the youngest firms have higher employment growth rates.
7. A notable difference is that enterprises in LEAP that do not have an industrial classification have been allocated to an industry. A methodological note explaining how the quarterly estimates are created is available on request.
8. The annualized average quarterly job creation rate is calculated as $(1+(JC(t)/4)/((Emp(t)+Emp(t-1))/2))^4-1$, where $JC(t)$ is the annualized employment created by new entrants in quarter t, and $Emp(t)$ and $Emp(t-1)$ are the annualized employment levels in quarter t and $t-1$, respectively.

growth rate for entrants and exits was 0.5%. This is one half of the net employment growth rate that includes changes due to incumbents. The employment dynamics represented by these entrants and exits are substantial, and can be important in accounting for changes in net employment growth.

Decline in business formation and jobs created by entrants since the recession

From 2001 Q1 to 2008 Q3, average annualized quarterly job creation rate by entrants was 2.3% (Chart 1). This contrasted with 1.5% for the 2008 Q4-to-2014 Q3 period. The entry rate of businesses showed a similar, but less pronounced, pattern. Prior to the recession, the average annualized quarterly entry rate of businesses was 15.2%, compared with the post-recession average of 13.6%. The most recent data show little deviation from these post-recession averages; in 2014 Q3, the job creation rate and entry rate were 1.6% and 13.5%, respectively. Nonetheless, these figures were up from lows of 1.4% for job creation in 2012 Q4, and 12.8% for entry in 2013 Q1.

Chart 1
Entry rate and job creation rate, seasonally adjusted, 2001 Q1 to 2014 Q3



Source: Statistics Canada, author's calculations based on data from the Canadian Business Employment Dynamics File.

Slowdown in job creation by entrants prevalent across all industries

The slowdown in job creation by entrants is not concentrated in any one industry (Table 1). Job creation rates declined in all industries in the post-recession period. The decline was more marked in mining, quarrying, and oil and gas extraction; utilities; manufacturing; wholesale trade; management of companies and enterprises; and administrative and support and waste management and remediation services. Data for the most recent quarters have been broadly stable.

Table 1
Average job creation rates by industry, pre- and post recession

	Job creation rate			
	2001 Q1 to 2008 Q3	2008 Q4 to 2014 Q3	Difference between latter and former period	2014 Q3 rates
	percent		percentage points	percent
Agriculture, forestry, fishing and hunting	3.4	3.1	-0.3	3.3
Mining, quarrying, and oil and gas extraction	1.8	0.8	-0.1	0.7
Utilities	0.7	0.2	-0.5	0.3
Construction	3.6	2.4	-1.2	2.3
Manufacturing	1.2	0.5	-0.7	0.5
Wholesale trade	1.5	0.7	-0.8	0.6
Retail trade	1.8	1.1	-0.6	1.0
Transportation and warehousing	1.7	1.3	-0.5	1.3
Information and cultural industries	2.4	1.2	-1.2	1.0
Finance and insurance	1.1	0.7	-0.5	0.6
Real estate and rental and leasing	4.0	3.1	-0.9	2.9
Professional, scientific and technical services	3.8	2.4	-1.4	2.9
Management of companies and enterprises	5.1	2.1	-2.9	2.4
Administrative and support, waste management and remediation services	2.9	1.4	-1.5	1.3
Arts, entertainment and recreation	2.5	1.5	-0.9	2.0
Accommodation and food services	4.0	3.2	-0.8	3.6
Other services	2.8	1.9	-1.0	1.7

Note: Difference may not appear exact because of rounding.
Source: Statistics Canada, author's calculations based on data from the Canadian Business Employment Dynamics File.

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